



Exterior façade

Healthcare facilities require a complexity of design elements to ensure patient well-being and safety. When comparing properties for materials used in hospital furnishings—and in particular the fenestration—aluminum always comes to the forefront.

- Location:** Rockville, MD
- Type:** Medical
207,000 sq. ft. expansion
- Architect:**
Wilmot/Sanz, Inc. – Gaithersburg, MD
- Glass fabricator:**
J.E. Berkowitz, L.P. – Pedricktown, NJ
- Contract glazier:**
Service Glass Industries, Inc. – Frederick, MD
- Window system manufacturer:**
Kawneer Company, Inc. – Norcross, GA
Trifab® VG (VersaGlaze®) 451T,
Warm-Light® warm-edge spacer
- AZON Technology/Machinery:**



Interior view

Shady Grove Adventist Hospital

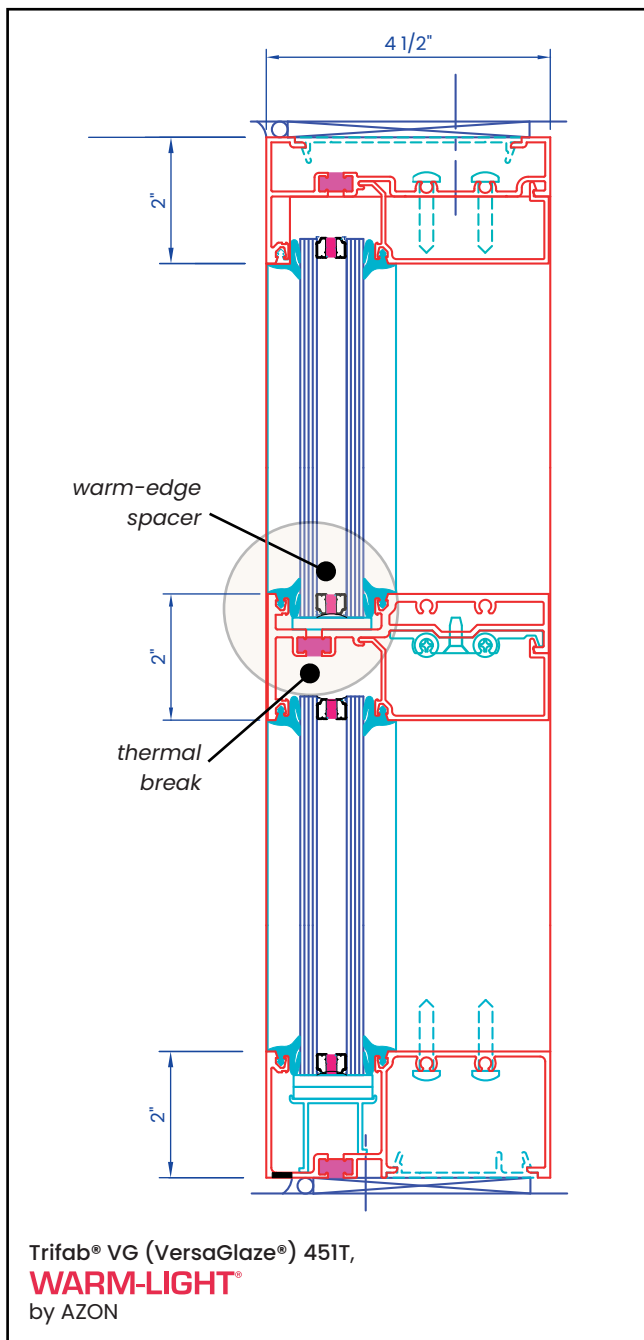
Described as the material that revolutionized modern construction, aluminum is an ideal building material because of its ease-of-fabrication, its recyclability and ability to withstand nature's weather and forces.

Beyond the structural and longevity factors, aluminum and the glazing that lets in daylight need improvement to be viable energy conservators. At the same time, studies are ongoing about the effects on health of excessive water vapor and interior air quality.

For building occupant comfort, health and energy-savings, building professionals turn to window manufacturers—like Kawneer to provide technologically advanced fenestration products with thermal performance and condensation resistance.

Healthcare providers employ a wide range of solutions within their healing environments in caring for patients.

In the building envelope, healthcare providers rely on construction professionals who turn to window manufacturers that provide systems to reduce condensation while providing daylighting for building occupant comfort, health and energy-savings to ensure healthy surroundings for all of the hospital's patients.



The action plan

Implementing technologies for the entire fenestration assembly that contribute to the energy efficiency and condensation resistance of aluminum windows—structural polyurethane pour and debridge-type thermal barriers in the framing, low-E glass coatings and Azon Warm-Light® spacer in the air space—is a vital step toward achieving sustainability in buildings and ensuring healthy surroundings for all patients in healthcare facilities.

The fenestration products

The glazing in this project was not the typical soft coat low-E that most people associate with energy efficiency. Maryland is located in a climate zone that relies on heating in the winter months. The building designers recognized the advantages of a high solar heat gain coefficient (SHGC) for this type of architecture and traded that advantage for a slightly higher U-factor.

To help offset some of the difference in U-factor while keeping the SHGC and visible light transmittance high (VLT), J.E. Berkowitz, L.P. furnished Warm-Light® by Azon warm-edge spacer into its insulating glass units. The materials in the fenestration assembly achieved a condensation resistance factor (CRF) of 71. In doing so, Shady Grove conformed to recent studies showing the increased health benefits of natural daylighting and lower condensation in hospital settings.

Sources and Photo Credits

adventisthealthcare.com
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Exterior facade (main p1)

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Interior space (bottom p1)

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